

REMARKS

Claims 1-57 were originally filed in the present application. No claims are currently added or deleted. Accordingly, claims 1-57 remain pending in the present application.

Reconsideration of this application in light of the following remarks is requested.

Objections under 35 U.S.C. §112

The Examiner has objected to claims 33 and 36 because of the alleged need for a definition or explanation of the word “substantially.” However, while Applicants do not necessarily agree, these claims have been amended as required by the Examiner, in an effort to expedite prosecution. Consequently, Applicants respectfully request the Examiner withdraw the objection.

Rejections under 35 U.S.C. §102(b)

Claims 1, 2, 4, 7-10, 19-24, 27, 28, 30-33, 35-39, 41, 43, 44, 46, 47, 49-51, 53, 55 and 57 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,919,219 to Taylor (“Taylor”).

Claim 1

To sustain a §102(b) rejection with respect to claim 1, Taylor must contain all of the elements of claim 1. However, Taylor does not disclose an impactee having a second down-hole tool connector and a plurality of flexible coupling fingers, wherein the coupling fingers are positionally fixed relative to the second down-hole tool connector in an axial direction, in the context of claim 1. In contrast, Taylor discloses a radially expandable lug array which is movable in an axial direction relative to the second down-hole connector, in the context of claim 1.

Nonetheless, the Examiner maintains that “Figures 3 and 4 show that the flexible coupling fingers 62 do not move relative to the second connector 54 but rather that it is other components of the tool that move to actuate the flexible coupling fingers.” (Examiner’s Action, Page 7). Applicants submit herewith color-versions of Figures 1A, 1B, and 2-4. In these figures, it is clear that that the lugs 63 of the lug array 62 move relative to the second connector 54.

That is, with reference to the color versions of Figures 3 and 4 submitted herewith, the lugs 63 (shaded gray) move relative to the adjustment sleeve 66 (shaded red). As shown in Figure 3, the lugs 63 are seated in the lug groove 72 of the adjustment sleeve 66, while in Figure 4 the lugs 63 have moved downward (relative to the page) to a position between the lug groove 72 and the lug land 74. Thus, the lugs 63 of the lug array 62 move relative to the adjustment sleeve 66.

As also shown in Figures 3 and 4, and also explicitly disclosed in the specification, the adjustment sleeve 66 (shaded red) is positionally fixed relative to the body 50.(shaded blue). “It is to be noted that the loading adjustment sleeve 66 is in threaded connection with the housing body 50 through corresponding threads 68 and 70.” (Column 4, lines 53-55). The body 50, in turn, is positionally fixed relative to the second connector 54 as part of the housing 24 (see Figs. 1A and 1B). (Column 4, lines 9-11). Thus, in operation, because the adjustment sleeve 66 is positionally fixed relative to the body 50, and the body 50 is positionally fixed relative to the second connector 54, the adjustment sleeve 66 must also be positionally fixed relative to the second connector 54.

Moreover, because the lugs 63 of the lug array 62 move relative to the adjustment sleeve 66, and the adjustment sleeve 66 is positionally fixed relative to the second connector 54, the lugs 63 of the lug array 62 must also move relative to the second connector 54. The movement of the lugs 63 is also explicitly disclosed in the specification:

At such time as sufficient compression has been applied through the latch array 62 as described, the lugs 62 reach the bevel between the latch land 74 and the groove 72. When the latch lugs 63 reach the lug groove 72, the lugs 63 suddenly expand into the lug groove 72 and permit the latch land 38 to substantially instantaneously move upwardly in response to the tensional force imposed by the operating string 12 to carry the hammer 20 into forceful impact against the anvil 22 to the fish 14 through the body 24. (Column 5, lines 3-12, emphasis added).

Therefore, Taylor fails to disclose that the lugs 63 of the lug array 62 are positionally fixed relative to the second connector 54, at least in the context of claim 1 of the present application. Consequently, Taylor fails to teach every element of claim 1, such that the §102(b) rejection of claim 1 cannot be supported by Taylor. Accordingly, Applicants respectfully request the Examiner withdraw the §102(b) rejection of claim 1.

Claim 33

To sustain a §102(b) rejection of claim 33, Taylor must contain all of the elements of claim 33. However, Taylor does not disclose an impactor and impactee configured to impact when a tensile force applied across first and second cased well-bore connectors reaches a field adjustable predetermined quantity, wherein the field adjustable predetermined quantity is adjustable over a continuous range of tensile force quantities, in the context of claim 33. In contrast, Taylor discloses that the “triggering” tensile force is incrementally adjustable over a range of tensile force quantities.

Nonetheless, the Examiner maintains that Taylor discloses, at column 8, line 34 – column 9, line 2, a triggering force that is field adjustable over a continuous range of tensile force quantities. (Examiner's Action, page 7). However, such assertion is not supported by the Taylor specification. As best shown in Figure 9, the adjustment sleeve 66 includes a groove 84 recessed within an internal surface of the adjustment sleeve 66. The groove 84 includes an upper part "A" and a lower part "B" which are connected at opposing ends. For example, if the cam pin 82 is seated in an upper corner "C" of the upper part "A" of the groove 84, as shown in Figure 9, movement of the cam pin 82 away from this position eventually causes the cam pin 82 to contact a lower corner "D" of the upper part "A" of the groove 84. In doing so, the cam pin 82 slides along the slanted surface "E" of the lower corner "D" while causing the adjustment sleeve 66 to rotate. As the cam pin 82 is moved upwards again, it contacts and then slides along the slanted surface "F" of another upper corner "G" of the upper part "A" of the groove 84. The upper corner "G" neighbors the upper corner "C." In doing so, the cam pin 82 slides along the slanted surface "F" of the upper corner "G" while causing the further rotation of the adjustment sleeve 66.

In operation, the cam pin 82 remains seated in one of the upper corners (e.g., "C" or "G") of either the upper part "A" or lower part "B" of the groove 84, depending upon the desired triggering force quantity. For example, performing the above-described adjustment method incrementally adjusts the triggering force by incrementally rotating the adjustment sleeve 66 to incrementally adjust the compressive force of the release spring 16 in 1000 lb. increments. (Column 8, lines 53-64).

Thus, Taylor only discloses that the triggering force can be incrementally adjusted over a range of quantities. Consequently, Taylor fails to disclose that the triggering force can be continuously adjusted over a range of tensile force quantities. Therefore, Taylor fails to teach every element of claim 33, such that the §102(b) rejection of claim 33 cannot be supported by Taylor. Accordingly, Applicants respectfully request the Examiner withdraw the §102(b) rejection of claim 33.

Claim 36

To sustain a §102(b) rejection of claim 36, Taylor must contain all of the elements of claim 36. However, as described above, Taylor does not disclose coupling an impact jar to down-hole equipment, the impact jar including a biasable member detachably engaged to an impactee in a pre-impact position and configured to disengage the impactee in response to a tensile force applied by a tensioning device reaching a predetermined quantity, wherein the predetermined quantity is field-adjustable over a continuous range of tensile force quantities, in the context of claim 36. That is, Taylor discloses a configuration in which the

“triggering” tensile force is incrementally adjustable over a range of tensile force quantities, but the “triggering” tensile force is not continuously adjustable of the range of tensile force quantities.

Therefore, Taylor fails to teach every element of claim 36, such that the §102(b) rejection of claim 36 cannot be supported by Taylor. Accordingly, Applicants respectfully request the Examiner withdraw the §102(b) rejection of claim 36.

Claim 53

To sustain a §102(b) rejection of claim 53 and its dependent claims, Taylor must contain all of the elements of claim 53. However, as described above, Taylor does not disclose an impact jar including an impactee having a plurality of flexible coupling fingers positionally fixed relative to a second working string assembly portion in an axial direction, in the context of claim 53. In contrast, as described above, Taylor discloses a radially expandable lug array 62 which is movable in an axial direction relative to the second down-hole connector 54, in the context of claim 53.

Therefore, Taylor fails to teach every element of claim 53, such that the §102(b) rejection of claim 53 cannot be supported by Taylor. Accordingly, Applicants respectfully request the Examiner withdraw the §102(b) rejection of claim 53.

Rejections Under 35 U.S.C. §103(a)

Several dependent claims were also rejected under 35 U.S.C. §103(a) as being unpatentable over Taylor, or as being unpatentable over Taylor in view of Nutter. However, as described above, Taylor fails to teach each and every element of any of the independent claims of the present application. Moreover, Nutter fails to cure these deficiencies. Therefore, Applicants traverse the §103 rejection of any of the currently-pending claims on the grounds that Taylor and Nutter, whether taken independently or in combination, are defective in establishing a *prima facie* case of obviousness with respect to claims 1, 33, 36, and 53 and, therefore, their dependent claims. Accordingly, Applicants respectfully request the Examiner withdraw the rejections under 35 U.S.C. §103(a).

Conclusion

It is clear from all of the foregoing that independent claims 1, 33, 36, and 53 are in condition for allowance. Dependent claims 2-32, 34, 35, 37-52, and 54-57 depend from and further limit independent claims 1, 33, 36, and 53 and, therefore, are allowable as well.

It is believed that all matters set forth in the Office Action have been addressed, and that claims 1-57 are in condition for allowance. Favorable consideration and an early indication of the allowability of the claims are respectfully requested. Should the Examiner deem that an interview with Applicants' undersigned attorney would expedite consideration, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



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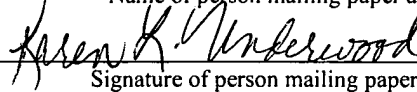
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